

**Regional Water Quality Control Board  
North Coast Region**

**Executive Officer's Summary Report  
October 17, 2019  
Regional Water Board Office  
Santa Rosa, California**

**ITEM: 2**

**SUBJECT:** Public Hearing on Order No. R1-2019-0037 to consider adoption of proposed Waste Discharge Requirements for the Humboldt State University Telonicher Marine Laboratory, WDID No. 1B12187NHUM, NPDES No. CA0025151 (Cathleen Goodwin)

**BOARD ACTION:** The Board will consider adoption of Waste Discharge Requirements Order No. R1-2019-0037 (Permit). This Order will serve as a National Pollutant Discharge Elimination System (NPDES) permit for a period of five years.

**BACKGROUND:** Humboldt State University is the owner and operator of the Telonicher Marine Laboratory (hereinafter Facility), a teaching and marine research institution. The Facility is located in the City of Trinidad in Humboldt County.

The Facility is a unit of Humboldt State University supporting education and research for the departments of Oceanography, Fisheries Biology, and Biology (Marine Biology option). The Facility also serves a public outreach function, including offering guided tours and summer programs led by a marine naturalist, and self-guided tours of the laboratory's exhibits (public display aquariums and touch tanks). The Facility has two large instructional classrooms/laboratories, offices for 14 faculty and graduate students, specialized research laboratories, an algal and zooplankton rearing area, and other rooms that support education and research. A recirculating seawater system supplies classrooms, a wet laboratory, and public display aquaria and touch tanks with high-quality filtered seawater.

The Permittee operates an intake pump at Trinidad Pier that pumps seawater from Trinidad Bay uphill into two 20,000-gallon seawater storage tanks at the Facility. The Facility is equipped with two pumps that recirculate seawater from a sump through two sand filters, then two chillers, then through aquariums and wet tables in the laboratory, then back to the sump. A portion of the seawater from the sump is pumped back to the storage tanks so that water is continually being replaced in the sump. The aquariums and wet tables drain by gravity back to the sump.

The most frequent non-storm water discharge from the Facility's waste seawater system consists of filter backwash. Sand filters are backwashed approximately once a month for periods ranging from 10 to 30 minutes. The maximum volume from a filter backwash event for the time period of 2013 through June 2019 was 9,920 gallons. Other discharges include draining of the two seawater storage tanks as needed (approximately every other year) and periodic diversion of circulating seawater during

maintenance activities or to exchange older seawater with new seawater. The Facility also discharges storm water from the Facility grounds.

The receiving water for the ocean discharges is designated by the State Water Resources Control Board (State Water Board) as the Trinidad Head Area of Special Biological Significance (Trinidad Head ASBS). The *Water Quality Control Plan for Ocean Waters of California (2015)* (Ocean Plan) prohibits waste discharges to the state's ASBS, unless an exception is granted by the State Water Board. On October 18, 2011 the State Water Board adopted Resolution No. 2011-0049 *Approving an Exception to the California Ocean Plan for the Humboldt State University Marine Laboratory Discharge Into the Trinidad Head Area of Special Biological Significance, including Special Protections for Beneficial Uses, and Approving a Mitigated Negative Declaration*. Order No. R1-2013-0006 was the first NPDES permit adopted for this Facility by the Regional Water Board and it included all of the requirements mandated by Resolution No. 2011-0049.

**DISCUSSION:** Order No. R1-2019-0037 (Proposed Order) replaces Order No. R1-2013-0006 (Previous Order). The Proposed Order retains all of the requirements mandated by Resolution No. 2011-0049. In addition, the Proposed Order includes the following changes and new requirements:

1. The reasonable potential analysis (RPA) conducted with data submitted by the Permittee during the term of the Previous Order demonstrated reasonable potential for several pollutants to exceed Ocean Plan water quality objectives in filter backwash water discharged from the Facility. Based on the results of the RPA, the Proposed Order includes new effluent limitations for arsenic, copper, lead, mercury, nickel, zinc, bis (2-ethylhexyl) phthalate, and polynuclear aromatics (PAHs). The RPA is based on a statistical analysis of the data that results in effluent limitations that are protective of water quality. A comparison of past monitoring results to the new effluent limitations reveals that the Permittee should be able to comply with most of the new effluent limitations but could have occasional exceedances of effluent limitations for copper, zinc, and PAHs. The Proposed Order requires the Permittee to develop a pollutant minimization program (PMP) for priority pollutants that are present in the effluent above an effluent limitation, if required by the Regional Water Board Executive Officer. The Permittee will be directed to develop a PMP describing the Permittee's strategy to ensure that any sources of such pollutants are properly controlled at the Facility. Development of a PMP will ensure that the Permittee has reviewed its Facility for all potential controllable sources of each pollutant.

Based on the RPA, effluent limitations established in the Previous Order for cadmium and chromium were not included in the Proposed Order due to a demonstration of no reasonable potential for these pollutants to exceed Ocean Plan water quality objectives. Effluent monitoring requirements for these two constituents have been retained in the MRP.

2. The reasonable potential analysis (RPA) conducted with data submitted by the Permittee during the term of the Previous Order demonstrated reasonable potential for several pollutants to exceed Ocean Plan water quality objectives in storm water discharged from the Facility, including ammonia, arsenic, cadmium, total chromium, copper, lead, nickel, selenium, silver, zinc, and PAHs. Consistent with the Statewide NPDES General Permit for Storm Water Discharges Associated with Industrial Activities, effluent limitations are not established for these storm water pollutants, rather, the Permittee is required to develop a storm water management plan/program (SWMP) and implement best management practices to reduce or prevent pollutants in storm water discharges from the Facility. The Proposed Order requires the Permittee to update its SWMP by March 1, 2020. The Permittee has plans to cease storm water discharges to Trinidad Bay through the seawater outfall by participating with the City of Trinidad to implement a project to infiltrate all storm water generated in the City and at the Facility. The storm water infiltration project is expected to be completed by Fall 2020.
3. Section VII.K (Compliance Determination) of the Order has been revised to include Ocean Plan implementation provisions for the six-month median, daily maximum, and instantaneous maximum and an explanation that the Permittee's discharges are all intermittent, short-duration, relatively low volume discharges, thus Ocean Plan instantaneous maximum and 6-month median effluent limitations apply rather maximum daily effluent limitations.
4. New receiving water limitations for fecal coliform bacteria and enterococci have been added to implement provisions of the new bacteria provisions that were adopted by the State Water Board on August 7, 2018 and amended into the Ocean Plan.
5. Changes have been made to monitoring locations. All non-storm water (i.e., filter backwash, seawater sump and storage tank draining) and storm water discharges from this Facility discharge to a storm drain system that also receives storm water inputs from the City of Trinidad. The Previous Order required all monitoring data for storm water and non-storm water discharges to be collected from a manhole (identified as Monitoring Location EFF-001) located off of the Facility property at a location that receives discharges from the Facility and the City. All monitoring data was reported as EFF-001 and it was difficult for Regional Water Board staff to understand which type of discharge was being reported. The Proposed Order provides differentiation of the discharges with the identifiers EFF-001A (filter backwash), EFF-001B (seawater sump or storage tank), EFF-001C (storm water), and EFF-001D (commingled wastewater consisting of some combination of filter backwash, seawater storage tank, and storm water).

Since discharges of City storm water are not the subject of this Permit, nor does the Permittee have control over the City's storm water discharges, the Permittee requested authorization to conduct monitoring at locations on the Permittee's property where monitoring would represent just the Permittee's discharges. The Proposed Order identifies new monitoring locations on the Permittee's property per the Permittee's request.

6. New accelerated monitoring requirements have been added that require the Permittee to collect additional samples whenever monitoring results indicate exceedances of effluent limitations.
7. The frequency for submitting self-monitoring reports (SMRs) has been reduced. This change is intended to reduce the cost of compliance and provide reporting efficiencies for the Permittee as well as review efficiencies for Regional Water Board staff. Section X.B of the Monitoring and Reporting Program requires quarterly submittal of all self-monitoring reports including some that were previously required on a monthly basis.

**PUBLIC COMMENT:** A copy of the Draft Order was posted on the Regional Water Board website and was available for public comment from August 5, 2019 through September 4, 2019. The Permittee submitted timely comments on the Draft Order. A full explanation of the comments and responses is provided in the attached Response to Comments document. Regional Water Board staff discussed the Permittee's comments and staff's proposed changes to the Proposed Order with the Permittee. The Permittee indicated that staff's responses to the Permittee's comments and changes to the Proposed Order are acceptable. Staff anticipates that the Proposed Order will be uncontested.

**RECOMMENDATIONS:** Adopt Order No. R1-2019-0037, as proposed.

**SUPPORTING DOCUMENTS:**

1. Proposed Order No. R1-2019-0037
2. Comments Provided on Order No. R1-2019-0037
3. Staff Response to Written Comments
4. Public Notice

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